THERMACHOICE UTERING BALLOON Therapy

ThermaChoice UBT System Operating Manual



ThermaChoice UBT System Operating Manual

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THERMACHOICE

Thermal Balloon Ablation System

Read all directions, cautions and warnings prior to use.

This manual provides directions for using the ThermaChoice Uterine Balloon Therapy (UBT) System.

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician with appropriate training.

Caution: This product contains natural rubber latex which may cause allergic reactions.

DEVICE DESCRIPTION

The ThermaChoice UBT System is a software controlled device designed to ablate uterine tissue by thermal energy. The system is comprised of a single-use balloon catheter, a reusable controller, umbilical cable, and power cord. The ThermaChoice catheter is designed for use only with the ThermaChoice controller.

The balloon catheter is 1) connected to the controller, 2) inserted through the cervix into the uterus, 3) filled with sterile, injectable fluid (5% dextrose in water) carefully stabilizing the pressure to 160-180 mmHg pressure, and 4) activated to thermally ablate endometrial tissue by maintaining a temperature of approximately 87°C (188°F) for 8 minutes.

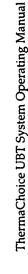
INDICATIONS

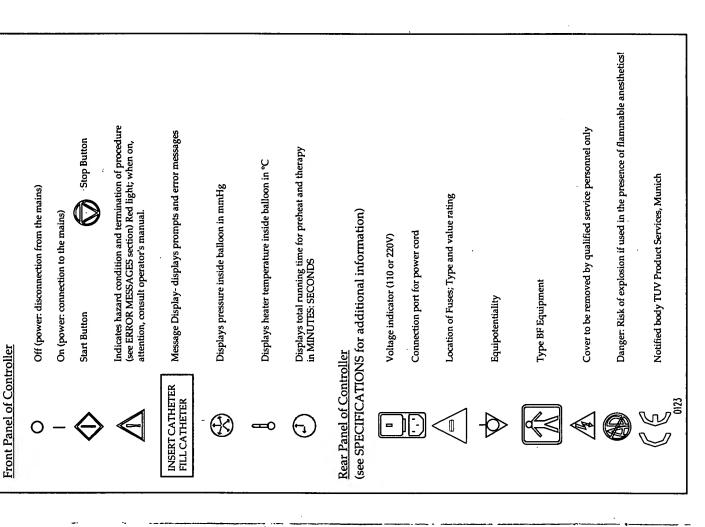
The ThermaChoice UBT system is a thermal ablation device intended to ablate the endometrial lining of the uterus in premenopausal women with menorrhagia (excessive uterine bleeding) due to benign causes for whom childbearing is complete.

CONTRAINDICATIONS

The device is contraindicated for use in:

- A patient who is pregnant or who wants to become pregnant in the future.
- A patient with a history of latex allergy or who has demonstrated a sensitivity to latex material.
 - A patient with known or suspected endometrial carcinoma (uterine cancer) or premalignant change of the endometrium such as unresolved adenomatous hyperplasia.
- A patient with any anatomic or pathologic condition in which weakness of the myometrium could exist, such as history of previous classical cesarean sections or transmural myomectomy.
- A patient with active genital or urinary tract infection at the time of procedure (e.g., cervicitis, vaginitis, endometritis, salpingitis, or cystitis).
 - A patient with an intrauterine device (IUD) currently in place.





Stop button

Total time display (minutes: seconds)

Connection port for reusable umbilical cable

Power switch Connection port for pressure line (pre-attached to single use balloon catheter)

Voltage indicator 110 or 220V

Fuse

Rear Panel of Controller

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MORNO: NEK OF NEK REDUCE MOST REOFF AND A BREEZE

VIDOCUTO

0 0 0

Connection port for AC power cord

Start button light

Hazard light

Front Panel of Controller (GC-EAS)

Catheter heater Temperature display (°C)

Pressure line

Umbilical cable

Connection plugs

Heater

Start button

Message display

Intra-balloon pressure display (mmHg)

DESTANCTION OF

6 9

OTHER PROPERTY

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DESCRIPTION OF SYMBOLS

Single-Use Balloon Catheter (GC-EAC) and Umbilical Cable (GC-EAU)

Depth, Sound Measurement (cm)

Fluid fill valve __ (trumpet valve)

Balloon

Fluid fill port for syringe (soft luer)

WARNINGS

Failure to follow any instructions or to heed any warnings or precautions could result in serious patient injury

- The device is intended for use only in women who do not desire to bear children because the likelihood of pregnancy is significantly decreased following this
- Endometrial ablation using the ThermaChoice UBT System is not a sterilization procedure. Pregnancies after ablation can be dangerous for both mother and
- Endometrial ablation procedures using the ThermaChoice UBT System should be performed only by medical professionals who have experience in performing procedures within the uterine cavity such as IUD insertion or dilation and curettage (D&C) and having adequate training and familiarity with the ThermaChoice system.
- Endometrial ablation procedures do not eliminate the potential for endometrial hyperplasia, or adenocarcinoma of the endometrium and may mask the physician's ability to detect or make a diagnosis of such pathology.
 - The UBT balloon catheter is for single use only do not reuse, or resterilize.
- session because of the potential for transmural injury to the uterus or injury to Do not treat patients for more than one therapy cycle in a given treatment adjacent viscera.
- Use caution not to perforate the uterine wall when sounding the uterus or inserting the UBT balloon catheter. If a perforation is present, the procedure should be terminated immediately.

PRECAUTIONS

- The UBT balloon catheter, controller, and umbilical cable are designed as a system. To ensure proper function, never use other components with the UBT system.
- cc of fluid and may require as much as 30 cc. Titration to achieve a stable pressure decline slowly during the course of the procedure as the uterus relaxes. If a pressure of 160 - 180 mmHg cannot be reached with 30 cc or less of fluid, or if there A starting pressure of 160 - 180 mmHg is recommended and typically requires 6-15 present. Adding additional fluid to the balloon may create (or exacerbate if already inserting fluid, do not exceed a pressure of 200 mmHg. Typically, pressure levels Rapid loss of pressure during a therapy cycle may indicate a uterine wall defect is (no fluctuations greater than ± 10 mmHg for at least 30 sec) prior to activating is a rapid drop in pressure, remove balloon catheter and check for catheter leak and/or uterine perforation. Never add additional fluid during a therapy cycle. the heating element is critical to proper functioning of the device. When present) a uterine wall defect such as a perforation.
 - Those patients who have undergone endometrial ablation and are later placed on hormone replacement therapy should have a progestin included in their regimen in order to avoid the increased risk of endometrial adenocarcinoma associated with unopposed estrogen replacement therapy.
- The safety and effectiveness of the ThermaChoice UBT system has not been fully evaluated in patients:

- with a large uterine cavity (>30 cc in volume or uterine sound >10 cm).
 - with a small uterine cavity (< 2 cc in volume or uterine sound < 6 cm).
- with submucosal myomas, a bicornuate or septate uterus or a previous endometrial resection/ablation.
- undergoing repeat endometrial ablation procedures.
 - who are post-menopausal

ADVERSE EVENTS

In a study of 134 women, the most frequent events that have been reported following completion of the procedure include:

- patients which ranged from mild to severe as reported during the intra-operative few hours and rarely continues beyond the first day following ablation. The use period and immediate post-operative period. This cramping will typically last a Uterine Balloon Therapy is usually sufficient to manage cramping and pelvic Cramping/pelvic pain - Post-treatment cramping was reported in 91.8% of the of non-steroidal anti-inflammatory drugs (NSAIDs) prior to and following
- patients in the immediate hours following the procedure. This may be attributed Nausea and Vomiting - Nausea and vomiting were reported for 23.9% of the to general anesthesia, and can be easily managed with medication.
- Endometritis was reported in 2.1% of patients. All patients responded to a course of oral antibiotics.
- resolve over a reasonable period of time warrants evaluation by appropriate with defecation or micturition were reported. Failure of such symptoms to Post-procedure symptoms such as pain, fever, nausea, vomiting, difficulty medical personnel.
- conducted outside of the United States. In all patients, the hematometra was Hematometra was reported in 0.6% of patients treated in clinical studies resolved with insertion of a uterine sound.
- A single perforation of the uterus was reported in a procedure conducted outside the United States.

OTHER POTENTIAL ADVERSE EFFECTS

The following adverse effects might be expected (potential), but have not yet been observed in clinical studies of the ThermaChoice UBT System:

- Rupture of the Uterus
- Thermal Injury to Adjacent Tissue
- Heated Liquid Escaping Into the Vascular Spaces and/or Cervix, Vagina, Fallopian Tubes, and Abdominal Cavity.
- Electrical Burn
- Allergic Reaction to Latex
- Hemorrhage
- Infection
- Pregnancy Pregnancy following endometrial ablation is dangerous to both mother and fetus.

Post-ablation-tubal sterilization syndrome - This is a complication following endometrial ablation in women who have also previously undergone tubal ligation. The pathophysiology of this condition is believed to be related to the regeneration of endometrium in the cornual areas of the uterus. Blood from these glands can flow back into the proximal fallopian tubes in cases where the lower uterine segment is extensively scarred. The proximal oviduct becomes filled with blood and fluid causing symptoms similar to those of an ectopic pregnancy.

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CLINICAL TRIAL

Conclusions: At twelve months of follow-up, balloon ablation was demonstrated to be at least as safe (with fewer intraoperative complications, less use of general anesthesia, and shorter procedure times), and as effective as hysteroscopic rollerball ablation in reducing menstrual bleeding to a clinically acceptable level in menorrhagic women who had completed their childbearing. Furthermore, statistically equivalent and significant reductions in patient-reported dysmenorrhea (mild, moderate, severe menstrual cramps), PMS symptoms (mild, moderate, severe common PMS symptoms), and overall impact of menses on lifestyle (scale of 1-10; 1 = none, 10 = severe) were experienced by both groups.

Purpose: The use of balloon thermal ablation for the treatment of menorrhagia for benign causes in an anatomically normal uterine cavity was compared with rollerball electrosurgical endometrial ablation with regard to safety and effectiveness. The primary effectiveness measure was a validated diary scoring system (adapted from Higham JM, O'Brien PMS, Shaw RW. Assessment of menstrual blood loss using a pictorial chart. Br J Obstet Gynaecol 1990;97:734-9). Success was defined as the reduction of excessive menstrual bleeding to normal flow or less. Secondary endpoints evaluated were overall percent decrease in diary scores and responses from a quality-of-life questionnaire. The endpoints for safety were based on the evaluation of adverse events associated with each procedure, including device-related complications, time of procedure, and type of anesthesia used.

Methods: This randomized, prospective, multicenter clinical investigation was conducted at 14 sites using investigators highly experienced with hysteroscopic rollerball endometrial ablation. All patients were ≥ 30 years old, premenopausal, and had completed childbearing. All had an anatomically normal uterine cavity > 4 cm and < 10 cm.

Three months of documented menorrhagia for benign causes was a requirement for inclusion and was confirmed with a diary score of at least 150 points. Endometrial biopsy and pap smear were required to rule out (pre)malignant uterine disease. No uterine thinning medications could be used for three months prior to treatment, and all patients underwent a three-minute suction curettage just prior to treatment. Selection of anesthesia regimen was left to the individual investigators. Treatment success was defined as reduction in menses to a diary score less than or equal to 75 in order to assure a return to eumenorrhea. In the original Higham study, a diary score of 100 had an 86% sensitivity and an 81% specificity for true menorrhagia for benign causes as determined by chemical analysis of the saturated pads.

Description of Patients: Two hundred seventy-five patients were randomized, 260 evaluated for safety, 255 of whom were eventually treated with either ThermaChoice Uterine Balloon Therapy (131) or rollerball ablation (124). A total of 125 UBT-treated

patients and 114 rollerball-treated patients were available for Efficacy Evaluation by having completed twelve-month follow-up. Baseline demographic and gynecological variables were statistically equivalent between the two groups with regard to age (UBT 40.2 years, RB 40.9 years), race, body mass index, mean baseline diary score (UBT 552.5, RB 570.5) and other criteria.

Results:

Table 1. Effectiveness at 12 Months	SI	•	
	THE	RMACHOICE (n = 125)	THERMACHOICE ROLLERBALL $(n = 125)$ $(n = 114)$
Study Success Rate (Diary Score ≤ 75)	~	80.2%*	84.3%*
Decrease to Normal Bleeding Levels or Less (Diary Score ≤ 100)		84.8%*	89.5%*
Mean Percent Decrease in Diary Scores		85.5 + 22.5**	91.7 + 12.0**
% Patients with > 90% Reduction in Diary Scores	•	61.6%*	68.4%*
% Patients with Diary Scores = 0	,-	15.2%**	27.2%**
Quality-of-Life			
% Patients with Anemia Pre/Post (HCT)		29.9% / 11.6%*	29.7% / 10.6%*
Satisfaction: Very Satisfied / Satisfied	~	85.6% / 10.4%*	86.7% / 12.4%*
% Patients with Reduction in Dysmenorrhea		70.4%*	75.4%*
Inability to Work Outside the Home (Pre/Post-Treatment Score) 39.7%* / 4.0%*	Treatment Score)	39.7%* / 4.0%*	41.9%* / 2.7%*
% Patients Reporting Severe Impact on Life Pre/Post		70.3%* / 3.2%*	78.6%* / 1.8%*

*Not statistically different (P > 0.05). **Statistically significant (P < 0.05)

Table 2. Safety at 12 Months		
	THERMACHOICE (n = 134)	ROLLERBALL (n = 126)
Intra-operative Adverse Events	None (0%)	2 fluid overloads 1 cervical laceration 1 uterine perforation (3.2%)
Post-operative Adverse Events	1 post-coital bleeding 3 endometritis 1 UTI (3.7%)	1 endometrius 1 hematometra 1 PATSS ¹ (2.4%)
Mean Procedure Time (minutes) Cases Performed Under General Anesthesia	27.4** 53.7%**	39.6** 84.1%**

 $^{^{1}}$ PATSS = post-ablation-tubal-sterilization syndrome * Not statistically different (P > 0.05).

PATIENT SELECTION

Menorrhagia can be caused by a variety of underlying problems including but not limited to, endometrial cancer, myomas, polyps, anovulation, drugs, and dysfunctional uterine bleeding. Patients should always be evaluated to determine the cause of their excessive uterine bleeding before any treatment option is initiated.

Consult medical literature relative to various endometrial ablation techniques, indications, contraindications, complications, and hazards prior to the performance of any endometrial ablation procedures.

The patient selection criteria are:

- Documented diagnosis of menorrhagia for benign causes
 - Completed childbearing
- Premenopausal

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^{**}Statistically significant (P < 0.05)

- Normal pap smear and endometrial biopsy
- sonography, hysteroscopy, or hysterosalpingography within 6 months prior to performing UBT should be used to rule out submucous fibroids, large polyps, Anatomically normal uterine cavity: standard sonography, saline infusion and congenital abnormalities.
- Uterine cavity depth of 6-10 cm
- Failed or contraindicated medical therapy.

PATIENT COUNSELING

As with any procedure the physician needs to discuss risks, benefits and alternatives with the patient prior to performing endometrial ablation.

ablation is not a sterilization procedure and should be provided an appropriate birth because the likelihood of pregnancy is significantly decreased following this proce-The device is intended for use only in women who do not desire to bear children control method. Patients with childbearing capacity should be cautioned of the dure. Patients of childbearing capacity should be counseled that endometrial potential complications which may ensue if they should become pregnant.

ablation and may last as long as a few weeks. Generally, the discharge is described as bloody during the first few days; by approximately one week, serosanguinous; then Vaginal discharge is typically experienced during the first few days following profuse and watery thereafter.

PRETREATMENT PREPARATION OF PATIENT

immediately prior to performing the endometrial ablation. The optimum pretreatment timing the menstrual cycle to the early proliferative phase, administering pretreatment The lining of the uterus should be thinned prior to UBT. This can be accomplished by drugs such as danocrine or GnRH agonists, or performing suction or sharp curettage regimes have not been determined at this time.

it is recommended that a non-steroidal anti-inflammatory drug (NSAID) be given at least one hour prior to treatment and continued post-operatively as necessary to reduce intra-operative and post-operative uterine cramping.

DIRECTIONS FOR USE

Please read all directions, cautions and warnings prior to use.

1.0 SET-UP

1.1. The following items are required for use of the UBT System.

Reorder#

Number GC-EAC GC-EAU

GC EAS

GC-EAP

UBT System

1 sterile disposable UBT balloon catheter and syringe (30cc)

I umbilical cable

1 controller

1 power cord

Medical Supplies

50cc sterile injectable 5% dextrose in water (D₅W) tenaculum, (weighted) speculum uterine sound, cervical dilator(s) sterile drape for umbilical cord

Open the sterile package containing the UBT balloon catheter and syringe. Disinfect umbilical cable as described at the end of this manual 1.2

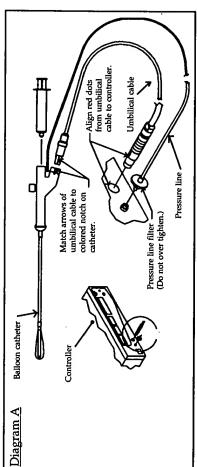
Make sure that the controller power is off before making the connection (Steps 1.3

Plug the power cord into the back of the controller and into the wall outlet. 1.4

catheter to the controller. Visually inspect the cable and connector plugs to ensure there are no defects or signs of wear. Drape umbilical cable with sterile drape and The umbilical cable includes a connector plug at each end to connect the balloon attach cable to the connector at the proximal end of the balloon catheter (match arrows of cable to colored notch on catheter). Attach the opposite end of the cable to the connection port on the front panel of controller. (Align red dots from umbilical cable to controller). (See Diagram A). 1.5

Note: When oriented correctly, the cable plugs will fit into the connectors easily and securely.

Connect the pressure line (pre-attached to balloon catheter) to the connection port tighten (See Diagram A). Periodically clean the entrance of the controller's port, (luer lock) on the front panel of controller. Tighten 1/4 turn only; do not overusing a cotton swab with 50% ethyl alcohol. 1.6



TURN ON the controller POWER. The Message Display will read:

Message Display: Note: N.NN = software revision level

REV. N.NN WARMING UP

After a few seconds, the Message Display will alternate between the following messages:

Message Display:

PRIME CATHETER

and

INSERT CATHETER FILL CATHETER

CATHETER PRIMING 2.0

FILL the 30cc syringe with approximately 15-20cc of sterile injectable 5% dextrose in water (D_xW). 2.1

Use only sterile injectable 5% dextrose in water ($D_{\xi}W$). Use of other fluids may compromise system.

- CONNECT syringe to the port in the proximal end of the balloon catheter. Do not overtighten syringe when connecting. 2.2
- Point balloon catheter tip downward. 2.3
- Press trumpet valve on top of balloon catheter handle and fill with 5-10cc of ${
 m D}_{{
 m c}}{
 m W}.$ 2.4
- pressure of -150 to -200 mmHg (indicated by pressure display on controller) Note: You may need to purge air from syringe several times to attain desired neg-Press trumpet valve and evacuate fluid and air from balloon to a negative 2.5
 - ative pressure. You must release trumpet valve to maintain negative pressure. Air should be completely evacuated to optimize the function of the device. The negative pressure creates a low-profile balloon insertion (balloon is drawn 5.6

tight against catheter tip). Do not go beyond -300 mmHg. Check that negative pressure is maintained for at least 10 seconds before proceeding.

If negative pressure cannot be maintained for 10 seconds, remove balloon catheter and replace.

PRESSURE TITRATION લં

- Fill syringe to 30cc with $D_{\rm s}W$, purge air, and connect to balloon catheter (do not overtighten). 3.1
- Using appropriate sterile technique and cervical/vaginal preparation, dilate cervix to 5mm if necessary. 3.2
- Measure depth of uterus. 3.3
- Wet outside of balloon with D_cW. 3.4
- CATHETER into uterus until tip is touching the fundus. Ensure depth indicated by markings on catheter is consistent with previous sound measurement. Use a After sounding uterus, and wetting the balloon, SLOWLY INSERT BALLOON tenaculum to hold cervix if necessary. 3.5

tion, as such force can cause the balloon to tear or the catheter to perforate the Ensure cervical dilation to 5mm and do not use excessive force during inseruterine wall.

Press trumpet valve on top of balloon catheter and fill balloon slowly to pressure of 160-180 mmHg using 2-30cc of D,W (Release trumpet valve to allow 3.6

often precipitates uterine relaxation, thereby temporarily decreasing pressure. minimum of 30 seconds. The pressure of the balloon against the uterine wall pressure to stabilize). Incrementally add small volumes to achieve a stable pressure (no fluctuations greater than ± 10 mmHg) of 160-180 mmHg for a

stabilize to 160-180 mmHg for 30-45 seconds before pressing START ($\langle \langle \rangle \rangle$ button. The pressure will ultimately stabilize with careful titration. For optimal results, it is extremely important to allow pressure to

mmHg; the pressure may then drop slowly for the remainder of the procedure. The ending balloon pressure may be as low as approximately 100 mmHg, and Note: Once the heater is activated, the pressure may initially rise 10-20 s typically between 120-150 mmHg.

Note: Activation pressure for the procedure is \geq 150 mmHg. The procedure cannot start until the pressure is over 150 mmHg. Note: It is recommended that for very small uteri, pressure titration should occur towards the lower end of the range (i.e. 160 mmHg) to minimize any potential for overpressure readings during the heating process.

Do not over pressurize balloon during titration. The controller can not display pressure > 300 mmHg. Optimal balloon volume depends on the potential volume of the uterine ca-30cc. If pressure level cannot be reached with 30cc of fluid, remove balloon catheter and check for uterine perforation and/or balloon catheter leak. Revity and is typically 6-15cc at >160 mmHg (at start) and may be as great as place balloon catheter if necessary.

TREATMENT

Message Display: 4.1

READY PRESS START

When a steady pressure of 160-180 mmHg is maintained, press START (\diamondsuit) button on controller to activate heater.

Do not add fluid once heater is activated, as this could result in patient injury. Hold balloon catheter immobile during procedure (with valve oriented upwards). After the start button is pressed, the controller activates the heater to achieve treatment temperature of 87°C (188°F) within 4 minutes. (This preheat cycle may take up to 4 minutes, but is usually 15-45 seconds.) 4.2

PREHEATING TO 87°C Note: If the treatment temperature of 87°C is not reached within 4 minutes, the controller will terminate the procedure. Remove fluid, remove catheter.

Message Display: 4.3

THERAPY CYCLE 87°C 8 MIN.

activation of the 8 minute therapy cycle. Time elapsed is shown on the "TOTAL Once 87°C is reached, you will hear an audible alarm that indicates automatic TIME" display (preheat + 8 minute therapy time) Note: Pressure may rise slightly with initial heating. It is common to then see the pressure fall gradually during procedure.

When the treatment cycle is completed, the Message Display will alternate between the following messages: 4.4

REMOVE CATHETER CYCLE COMPLETE

TURN POWER OFF

and

(cycle) and an audible alarm will sound. Total treatment time will be displayed The controller automatically terminates the heater at the end of the treatment on controller (preheat time plus 8 minute therapy time). 4.5

POST-TREATMENT ហ

- Wait approximately 30 seconds for fluid to cool and then remove fluid by drawing back on syringe while depressing trumpet valve. Remove all fluid from balloon. Remove balloon catheter. Check that entire fluid volume is with drawn. 5.1
- Disconnect catheter pressure line from controller. 5.2
- Disconnect umbilical cable from catheter by holding grey shell and pulling 5.3
- Disconnect umbilical cable from controller by holding stainless steel ribbed shell and pulling back. Do not pull on the cable itself. 5.4
- Discard catheter. Retain umbilical cable and disinfect for next case. 5.5
 - Power must be turned off before beginning another procedure. 5.6

OPERATING PARAMETERS / ALARM AND DISPLAY MESSAGES

The controller is designed to monitor time, temperature and pressure within parameters preset at the factory.

- ALERT. If the temperature and/or pressure increases or falls beyond a level pre-set at the factory, the controller will sound a short audible alert.
- procedure and display an error message. Additionally, if the controller detects HAZARD ALARM/TERMINATION OF PROCEDURE (HEATER SHUT OFF a system failure, the procedure will be terminated. If the procedure is termi-LIMITS). If the temperature and/or pressure increases or falls outside the operating parameters, the controller will sound an alarm, terminate the nated, the Message Display will display a message indicating the cause.

_					
The following chart explains operating parameters for temperature, time, and pressure.	Alarm/Heater Shut Off Limits	≥95°C for 2 sec or be- ≤75°C for 15 sec*	≥210 mmHg	<45 mmHg	>4 minute pre-heat
r tempera	Alarm/1	Over Under	Over	Under	Over
ting parameters fo	Range	75-90°C	45-210 mmHg	9	
g chart explains opera	Standard	87°C	Titrate to 160-180 45 mnHg before starting procedure; Activation Pressure (Minimum starting	pressure) ≥ 150 mmHg	8 minute therapy cycle after reaching 87°C (preheat phase)
The followin	:	Temperature	Pressure		Time

*or failure to achieve temperature of 87°C within 4 minute preheat phase.

an audible alert (intended only as warning signals to the clinician). These values are When parameters extend outside the normal operating range, the controller sounds listed below and reside between normal operating and termination parameters (see previous chart):

		Alert (Warning)
Temperature	Over	> 90°C & < 95°C
	Under	of 2 seconds (83°C for 2 seconds
Pressure	Over	> 200 mmHg & < 210 mmHg
	Under	for 2 seconds > 45 mmHg & < 70 mmHg for 2 seconds

ERROR MESSAGES

display may be blank or may indicate an error code. If any of these occur turn off the i.e. surge and fast transients, the system may terminate the procedure. The message Under electrostatic discharge to the controller or abnormal line voltage conditions, power to the controller and restart the procedure. In addition to the operating messages listed in the "Directions," the Message Display also provides messages which indicate conditions under which the controller either will not begin treatment or will terminate treatment after the heating cycle has been

Prior to pressing START (\diamondsuit) — the following error messages indicate conditions under which the controller will not begin therapy cycle until corrected:

MESSAGE DISPLAY	REASON	ACTION
CONNECT CATHETER	Balloon catheter and/or umbilical cable is not connected.	Connect balloon catheter. Ensure connections are secure.
CATHETER ERROR REPLACE CATHETER	Balloon catheter and/or umbilical cable is not functioning properly.	Replace balloon catheter and/or umbilical cable.
SYSTEM ERROR TURN POWER OFF	System is not functioning properly.	Return controller for repair.

<u>After pressing START</u> (\bigoplus) – the following error messages indicate conditions under which the controller will terminate the procedure and disable the heating element after the therapy cycle has begun:

MESSAGE DISPLAY	REASON	ACTION
CATHETER ERROR END PROCEDURE	Balloon catheter is not functioning Remove fluid. properly.	Remove fluid. Remove balloon catheter.
SYSTEM ERROR or HEATER ERROR and END PROCEDURE	System is not functioning properly.	Remove fluid. Remove balloon catheter. Return controller for repair.
PREHEAT ERROR or OVERHEAT ERROR or PRESSURE ERROR and END PROCEDURE	Treatment temperature and/or pressure is outside standard operating parameters.	Remove fluid. Remove balloon catheter.

WARRANTY

Gynecare, Inc., warrants the original purchase of the Gynecare UBT System Controller shall be free of defects in material and workmanship when used as intended under normal surgical conditions and in conformance with its directions for use and maintenance instructions. The obligation of Gynecare, Inc., under this warranty shall be limited to the repair or replacement, each at no charge, at the option of Gynecare, Inc., within one year from the date of purchase, if examination shall disclose to the satisfaction of Gynecare, Inc., that the controller does not meet this warranty.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND ALL OTHER OBLIGATIONS AND LIABILITIES ON THE PART OF GYNECARE. GYNECARE, INC., NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF A GYNECARE CONTROLLER. THIS WARRANTY SHALL NOT APPLY TO A GYNECARE CONTROLLER OR ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NECLIGENCE, ALTERATION, ABUSE, OR MISUSE, NOR TO ANY GYNECARE, INC., CONTROLLER THAT HAS BEEN REPAIRED OR ALTERED BY ANYONE OTHER THAN AN AUTH REGARD TO ACCESSORIES OR PARTS USED IN CONJUNCTION WITH THE GYNECARE, INC. CONTROLLER AND NOT SUPPLIED AND MANUFACTURED BY GYNECARE, INC. THE TERM "ORIGINAL PURCHASER", AS USED IN THE WARRANTY,

SHALL BE DEEMED TO MEAN THAT PERSON OR ORGANIZATION AND ITS EMPLOY-EES, IF APPLICABLE, TO WHOM THE GYNECARE CONTROLLER WAS SOLD BY GYNECARE, INC. THIS WARRANTY MAY NOT BE ASSIGNED OR TRANSFERRED IN ANY MANNER.

Should any Gynecare, Inc. controller become inoperable after the one year period of this Warranty or should damage occur which is not covered under the terms of this Warranty, Gynecare, Inc. will, upon request, be willing to repair the controller, if possible, for an appropriate handling and repair charge.

SERVICE

Should the UBT System Controller become inoperable contact Gynecare's Customer Service Department for instructions and a return material authorization number. Clean and repackage the controller appropriately and return it for repair, servicing and/or modification to the authorized locations listed below. If the controller is not under warranty, an appropriate handling and repair charge will be established after receipt and examination of the controller.

For service, technical support or reorder information, contact in the U.S.:

Gynecare, Inc.

Ethicon, Inc.

A Johnson & Johnson Company

235 Constitution Drive

Menlo Park, CA 94025

Phone: (650) 614-2500 Toll Free: (800) 336-4963

Fax: (650) 462-6742

Note: Any device related incidence or problems which are felt to represent a safety issue, should be reported to Gynecare's Customer Service Department or Authorized European Representative.

AUTHORIZED EUROPEAN REPRESENTATIVE

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ORDERING INFORMATION AND RELATED PARTS

AND ACCESSORIES

<u>Description</u>	UBT System Controller	UBT Balloon Catheter (sterile, single-use)	UBT Umbilical Cable (reusable up to	20 applications)	UBT Power cord (specify country)	UBT System Manual	UBT Instruction card
Reorder Number	GC-EAS	GC-EAC	GC-EAU		GC-EAP	GC-EAM	GC-EAI

SPECIFICATIONS (CONTROLLER AND UMBILICAL CABLE)

Power Requirements	Power Requirements
Maine Eucos	or 220-240V; 50/60 Hz; 1A; 3-wire grounded system
Matter I uses	
Heater Fuses	
Dimensions	Height 10.2cm (4in.), width 41.2cm
	(16.25in.), depth 37.0cm (14.56 in.)
Weight	6.9 kg (15.3 lb) (controller only)
Case	Aluminum and impact-resistant plastic
Umbilical Cable	Length 152 cm (60 in.)

MAINTENANCE

CALIBRATION: 1.0

that may be present on the measurement circuitry, and therefore automatically provides a single point calibration. In addition, the pressure sensor utilized in Every time the UBT system is powered up, the controller zeros out the offsets accurate and stable over the operating range. These sensors are of differential atmosphere. In addition to the internal means of calibration, it is possible to ensure the proper operation of the system against other calibrated devices. the controller is internally calibrated and temperaure compensated and is This procedure is recommended to be performed on an annual basis. The type, and therefore measure the balloon pressure relative to the outside procedure also needs to be carried out if it is believed that the system is behaving unexpectedly.

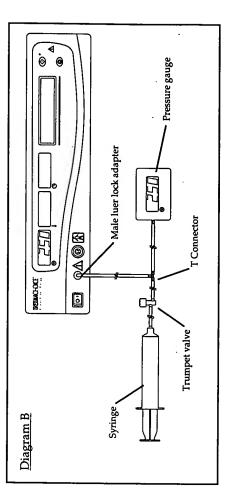
Note: There are no calibration adjustments on the controller. If the unit does not meet the calibration requirements, it needs to be sent back to the

PRESSURE CALIBRATION 1.1

Equipment List 1.1.1.

The following equipment list or equivalent is needed to perform the procedure:

- 1. Pressure meter: DigilMano model DPM 2000PS. NETECH Corporation, 60 Bethpage Drive, Hickville, NY 11801, Telephone: (800) 547-6557/ (Any calibrated, NBS traceable pressure gauge with a range of at least \pm 6 psi can be used).
- Syringe: PN 309662, Becton-Dickinson. State Surgical Supply, 3380 Vincent Rd. # C, Pleasant Hill, CA 94523, Telephone: (510) 284-1060.
- Trumpet valve: PN S5402601, Braun Medical, Inc., 824 Twelfth Ave, PO Box 4027, Bethlehem, PA 18018-0027, Telephone: (610) 266-0500. 6
- T connector: PN T20-1, Value Plastics, Inc., 3350 Eastbrook Dr., Fort Collins, CO 80525, Telephone: (970) 223-0953.
 - 5. Tubing: 0.093 ID, 0.156 OD, Norton Performance Plastics Corp, PO Box 3660, Akron OH 44309-3660, Telephone: (800) 798-1539.
- Male luer lock adapter: PN B0850402, Braun Medical, Inc., 824 Twelfth Ave., PO Box 4027, Bethlehem, PA 18018-0027, Telephone: (610) 266-0500. ٠.



1.1.2. Procedure

- 1. With no attachments to the luer lock, apply power to the controller. The pressure display should read 0 ± 10 mmHg.
- Diagram B, and connect to the connection port (luer lock) of the controller. trumpet valve, the male luer lock adapter, and the syringe as shown in Assemble the digital pressure gauge, the tubing, the T connector, the
- While depressing the trumpet valve, apply vacuum to the system using the syringe until the gauge reads approximately -250 mmHg.
 - Release the trumpet valve. The controller pressure reading should be within \pm 10 mmHg of the gauge reading.
- 5. While depressing the trumpet valve, apply pressure to the system until the reading on the digital display meter indicates a pressure of approximately

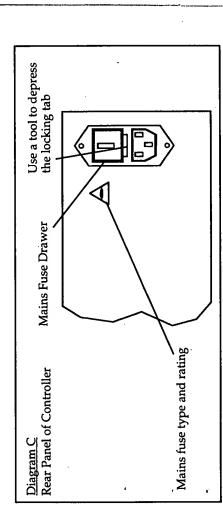
 Release the trumpet valve. The controller pressure reading should be within ± 10 mmHg of the gauge reading.

1.2. TEMPERATURE CALIBRATION

- 1. Obtain a calibrated digital or glass thermometer.
- 2. Place this thermometer in close proximity to a new UBT catheter tip and allow them to come to thermal equilibrium with the ambient.
- Connect the catheter to the controller using the umbilical cable as described earlier in the manual.
- 4. Power up the controller.
- 5. Note the thermometer reading and compare to that of the controller. The readings should be within ±5 degrees Celsius.
- Insert the balloon end of the catheter along with the thermometer in 80-90 degree Celsius water.
- Allow a few minutes for the catheter and the thermometer to come to thermal equilibrium.
- Compare the two temperature readings. They should be within ± 5 degrees Celsius.

2.0 FUSE REPLACEMENT:

Fuse: In the event of a main fuse failure, turn off the power and unplug the rear of the controller to allow fuse access. Using a tool such as a screwdriver, remove the fuse drawer by depressing the locking tab. See Diagram C below:



Replace both fuses with the same type and rating as specified on the rear of the controller. Reinsert the fuse drawer until the locking tab snaps into place. Reconnect the power cord and restore power to the controller. If a fuse fails again, disconnect all power to the controller and return it to Gynecare.

All other service must be performed by appropriately qualified technical personnel. Field repair, other than the controller's external fuse replacement voids all warranties and may not be performed without express authorization from Gynecare.

3.0 CLEANING: CONTROLLER SYSTEM

It is good practice to routinely clean the exterior surface of the device.

- Disconnect all umbilical cables and unplug the power cord from the wall outlet before cleaning.
- 2. Use a cloth dampened with 50% water and 50% isopropyl alcohol, or a mild, nonabrasive detergent (such as commercially available dish cleaning liquid) mixed with water.
- Periodically clean the entrance of the controller's port (luer lock) using a cotton swab with 50% isopropyl alcohol.

Do not autoclave, ETO sterilize, or immerse the controller or umbilical cable in a liquid. Do not allow liquids to enter the controller during cleaning.

4.0 DISINFECTION: UMBILICAL CABLE

The UBT Umbilical Cable is packaged non-sterile. After each use, the cable should be disinfected. To disinfect, wipe down the cable with a damp cloth using a solution of 50% water and 50% isopropyl alcohol. Ensure that the cable and connectors are completely dry. Inspect the cable and the connector plugs before each use for signs of wear and replace if necessary. The umbilical has been validated for 20 cycles. Following 20 uses, discard the cable, and replace.

5.0 POWER CORD

Users in North America operating from a nominal 120 Vac system must select a Type SJT, SJTO, SJO, or SJE, Hospital Grade cord set. The power supply cord must be marked "Grounding Reliability can only be achieved when the equipment is connected to an equivalent receptacle marked "Hospital Grade" or "Hospital Only"".